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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/080,151	02/19/2002	Shuichi Fukumori	4313	9285

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EXAMINER

TSUKERMAN, LARISA Z

ART UNIT	PAPER NUMBER
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2833

DATE MAILED: 04/11/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/080,151

Applicant(s)

FUKUMORI ET AL.

Examiner

Larisa Z Tsukerman

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 February 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-6,8-10 and 12 is/are rejected.
- 7) ☒ Claim(s) 3,7,11 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3, 4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2, 4, 5 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Arakelian et al. (6089918) in view of Ballarini (4466683).

In regard to claim 1, Arakelian discloses a fuse holder 10 into which a blade type fuse 12, with blade terminals 12b protruding from the body 12a thereof, is fitted, said fuse holder comprising a holder housing 16 having wide walls 16a at the front and the rear and narrow walls 16b on the right and the left and forming, with these walls, a chamber 18, which will hold the blade terminals of a fuse inserted from the top side and at least a part of the body of the fuse (see Fig.3), and two contacts 20, each of which has an intermediate part 20b fixed to the holder housing (see Figs.3 and 4), a connecting part 22, at one end, extending into the chamber to fit with a blade terminal 12b, and a leg 20a, at the other end, extending out of the holder housing.

Although, Arakelian does not disclose **a printed circuit board**, one of ordinary skill in the art would recognize that the leg of the contact 20 is capable to be soldered or press-fitted onto a printed circuit board. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made

to modify the Arakelian invention by mounting the housing 16 onto a printed circuit board.

Further, Arakelian does not disclose **two coupling parts, which are provided on the holder housing to disconnectably fit the holder housing onto holder housings of two other adjacent fuse holders**. Ballarini teaches a modular strip fuse assembly 3 comprising several identical component blocks 4 engaged with each other (see Abstract, lines 2-5) and having two opposing faces with respective attachment means (see Col. 1, lines 28-39) in order to include more fuse carriers to increase number of according to the needs of the equipment. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify a **holder housing** of Arakelian with **two coupling parts** of Ballarini in order to increase versatility of the device.

In regard to claim 2, the connecting part 22 of the contact is formed into a fork shape (see 22,24 in Fig.4), which can be expanded towards the front wall and the rear wall of the holder housing, and the clearances between the connecting part and the front wall and the rear wall are set in such a way that they allow deformation of the connecting part while limiting its excessive deformation.

Please note, that reference shows the above limitations, since excessive deformation can be defined as deformation further than the distance between the arm of the fork and the wall of the holder housing.

In regard to claims 4 and 5, Arakelian does not disclose how the intermediate parts connected to the holder housing. Both methods (press-fit or

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enveloped-cast the contacts into a space among the walls of the holder housing) are well known in the Art and provided the structure shown in Figs. 3 and 4.

In regard to claim 12, Arakelian does not describe that the holder housing has the same color as that of the body of the fuse. However, it would have obvious that the holder housing has the same color as that of the body of the fuse, since applicant has not disclosed that this limitation solve any stated problem or is for any particular purpose and it appears that the invention would perform equally well with the same or different combination of colors of holder housing and the body of the fuse.

Claims 6 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Arakelian et al. (6089918) and Ballarini (4466683), as applied to claim 1 above, and further in view of French (3378808).

In regard to claim 6, Arakelian when modified by Ballarini includes most of the claimed invention except for the intermediate part of the contact is enveloped-cast in an insert and this **insert** is fitted into a space among the walls of the holder housing. French teaches a contact 19 is enveloped-cast in an insert 11, which is one of routine step of manufacturing.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize the contact enveloped-cast in the insert in structure of Arakelian, as taught by French, in order to simplify a manufacturing and assembly of a device.

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In regard to claim 8, the insert is formed of a material (a pliable insulating plastic or rubber, Col. 2, line 5), of which heat resistance is superior to that of the holder housing.

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Arakelian et al. (6089918) and Ballarini (4466683), as applied to claim 1 above, and further in view of Lemke et al.(6482050). Arakelian when modified by Ballarini includes most of the claimed invention except for the leg of the contact is forked into two branches. Lemke teaches an **alternative** contact 100 having a leg forked into two branches (see Fig. 6). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize the forked leg contact (as **alternative way** to attach the contact, as shown by Lemke) in Arakelian device.

Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Arakelian et al. (6089918) and Ballarini (4466683), as applied to claim 1 above, and further in view of Geoghegan (5409399). Arakelian when modified by Ballarini includes most of the claimed invention except for a protrusion is formed in the leg of the contact. Geoghegan teaches a contact having a leg 20 with a protrusion 38 to exert the normal force between the leg and a hole 22 in PCB. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made and for the same reason, to modify the structure of the leg in Arakelian by including a protrusion portion, as taught by Geoghegan.

Allowable Subject Matter

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Claims 3, 7 and 11 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

The prior Art or records does not teach or suggest a fuse holder comprising a holder housing wherein:

Regarding claim 3, the holder housing having two coupling parts, the first coupling part comprises two plates, which are provided on a wall and have top ends opposing to each other, and in plan view, one plate has an inverted L shape, and the other plate has an inverted reversed L shape, and the second coupling part comprises ribs, which are provided on walls, extend in the height direction, and will be held between the top ends of the first coupling part and the wall, on which the first coupling part is provided;

Regarding claim 7, two inserts, in which the intermediate part of the contact is enveloped, are coupled together; and

Regarding claim 11, the bottom of the holder housing is provided with two bosses in positions that are asymmetric to each other in relation to a line, which runs, when seen from the bottom, between the front wall and the rear wall approximately in parallel with these walls.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

Colleran et al. (4943248), Schmeling (4184733)Michaels et al. (3848951),
Cheschka (4391482), Pasch et al. (5552951), Donahue et al. (5785537), Krause
et al. (6280253).

Any inquiry concerning this communication or earlier communications from
the examiner should be directed to Larisa Z Tsukerman whose telephone
number is (703)-308-6038. The examiner can normally be reached on Monday
through Friday from 8:30 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the
examiner's supervisor, Paula A Bradley can be reached on 703-308-2319. The
fax phone numbers for the organization where this application or proceeding is
assigned are (703)-308-7722 for regular communications and (703)-308-7724 for
After Final communications.

Any inquiry of a general nature or relating to the status of this application
or proceeding should be directed to the receptionist whose telephone number is
(703)-308-0956.

L.T.
April 7, 2003



THO D. TA
PRIMARY EXAMINER